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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,523	01/16/2004	Paul Anthony Thomas	60130-1987;03MRA0008	7042

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EXAMINER

KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,523

Applicant(s)

THOMAS ET AL.

Examiner

Bradley T King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/04, 07/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 5 recites "the pad spring further includes radially outwardly curved ends that radially retain the pad spring on the backplate". It is not clear how the disclosed curved ends can radially retain the pad spring. The disclosure describes the ends cooperating with abutments on the backing plate which prevents sliding. It appears that the ends retain the spring in the circumferential direction, not in the radial direction.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites "the backing plate". There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art of figures 1-4.

The admitted prior art of figures 1-4 disclose all the limitations of the instant claims including; a brake caliper having an outboard side; a brake pad 36; a pad spring 24 including a spring planar region and a rounded edge (a rounded edge is inherently created when elements 46 are folded over as disclosed, also note rounded edge 42); and a pad retainer 26 including a retainer planar region having a first radius for engagement with said spring planar region of the pad spring to restrain radial movement of the brake pad, wherein the pad retainer is secured to the outboard side of the brake caliper at a second radius that is less than the first radius (see figure 2), the pad retainer

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further including a crook (see figure 4) adjacent to the retainer planar region of the pad retainer and the rounded edge of the pad spring.

Regarding claim 2, the pad spring further includes a second rounded edge (the other section 46 or 42), and the spring planar region is between the rounded edge and the second rounded edge.

Regarding claim 3, pad spring is substantially elongate and defined by a length and a width, and the pad spring includes a central region located along the a portion of the length of the pad spring (between and including elements 46), and the spring planar region of the pad spring is located on the central region of the pad spring, wherein the central region defines a maximum width (at elements 46) of the pad spring and a remainder of the pad spring has a reduced width less than the maximum width. See figure 1.

Regarding claim 4, see figure 3.

Regarding claim 9, it is maintained that the radius of the rounded edge created by bent portions 46 will inherently be of similar radius, as broadly recited, due to the similar thickness of the spring and the retainer. See figure 4 which shows the crook having a small radius.

Claims 1-2, 4, and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 703 378.

EP 0 703 378 discloses all the limitations of the instant claims including; a brake caliper having an outboard side; a brake pad 12; a pad spring 26 including a spring

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planar region and a rounded edge (see the portions in figure 1 labeled 24 or 18); and a pad retainer 32 including a retainer planar region having a first radius for engagement with said spring planar region of the pad spring to restrain radial movement of the brake pad, wherein the pad retainer is secured to the outboard side of the brake caliper at a second radius that is less than the first radius (see figure 3), the pad retainer further including a crook (see figure 3) adjacent to the retainer planar region of the pad retainer and the rounded edge of the pad spring.

Regarding claim 2, the pad spring further includes a second rounded edge (the other end), and the spring planar region is between the rounded edge and the second rounded edge.

Regarding claim 4, see figure 1.

Regarding claim 7, the brake includes a backplate 10 having a backplate protrusion 16, and wherein the pad spring further includes an aperture 20, and wherein the backplate protrusion of the backplate is located in the aperture of the pad spring to prevent axial movement between the pad spring and the backplate.

Regarding claim 8, the pad spring includes a spring protrusion 22 or 24 located around the backplate to prevent axial movement between the pad spring and the backplate.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 248 385.

EP 0 248 385 discloses all the limitations of the instant claims including; a brake caliper having an outboard side; a brake pad 70; a pad spring 76 including a spring planar region and a rounded edge (at element 86, see figure 6 and the ends); and a pad retainer 60 including a retainer planar region having a first radius for engagement with said spring planar region of the pad spring to restrain radial movement of the brake pad, wherein the pad retainer is secured to the outboard side of the brake caliper at a second radius that is less than the first radius (see figure 3), the pad retainer further including a crook (see figure 3) adjacent to the retainer planar region of the pad retainer and the rounded edge of the pad spring.

Regarding claim 2, the pad spring further includes a second rounded edge (the other end or at element 86), and the spring planar region is between the rounded edge and the second rounded edge.

Regarding claim 3, pad spring is substantially elongate and defined by a length and a width, and the pad spring includes a central region located along the a portion of the length of the pad spring (between and including elements 86), and the spring planar region of the pad spring is located on the central region of the pad spring, wherein the central region defines a maximum width (at elements 86) of the pad spring and a remainder of the pad spring has a reduced width less than the maximum width. See figure 5.

Regarding claim 4, see figure 4.

Regarding claim 5, as best understood, the pad spring further includes radially outwardly curved ends that retain the pad spring on the backplate. See figure 4.

Regarding claim 6, the backplate includes complementary curved surfaces for abutment with the radially outwardly curved ends of the pad spring. See figure 4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of Figures 1-4.

The admitted prior art of figures 1-4 disclose all the limitations of the instant claims with exception to the specific crook radius dimension. It is noted that the instant disclosure fails to indicate any criticality in the dimension and further teaches that the ranges may be broadened. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize various crook radii depending on the size of the brake assembly and thickness of the retainer to facilitate manufacture (thicker materials will bend to greater radii) and reduce stress concentrations in the element. Also note, *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

Claims 5-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 703 378.

EP 0 703 378 discloses all the limitations of the instant claims with exception to the combination of a rounded edge and radially outwardly curved ends (the rejections above rely on the curved ends to read on the rounded edge). EP 0 703 378 discloses outwardly curved ends 24. the examiner takes official notice that it is well known to round the edges of sheet metal elements to remove sharp edges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to round the edges of the spring of EP 0 703 378 to reduce the sharpness of the edge, thereby increase safety in the assembling and handling of the device.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DE 3612355, US#'s 5875873, 4993520, 4049087, and 3298469. All show braking devices.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (703) 308-8346. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK


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